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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,598	03/17/2004	Wai San Chan	70030731-1	7364

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EXAMINER
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NGUYEN, JIMMY H

ART UNIT	PAPER NUMBER
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2629

DATE MAILED: 09/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/803,598	<b>Applicant(s)</b> CHAN ET AL.	
	<b>Examiner</b> Jimmy H. Nguyen	<b>Art Unit</b> 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This Office Action is made in response to applicant's papers filed on 03/17/2004. Claims 1-10 are currently pending in the application. An action follows below:

#### *Specification*

2. The disclosure is objected to because of the following informalities: "an existing optical mouse sensor circuit 250" in line 5 of page 10 must be changed to -- an existing optical mouse sensor 250 --, so as to make the feature consistent with the feature disclosed in other places of the specification, e.g., in line 2 of page 10, and Fig. 2 or 3.

Appropriate correction is required.

#### *Drawings*

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the feature, "an analog and digital core" in line 2 of claims 4 and 11, "an integrated add-on" in line 2 of claim 6, and "components" in line 2 of claim 13, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the

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drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Claim Objections*

4. Claims 3, 6, 7, 9, 12 and 13 are objected to under 37 CFR 1.75(a) because although these claims meet the requirement 112/2d, i.e., the metes and bounds are determinable, however, the following changes should be made:

As to claim 3, "1" in line 1 must be changed to -- 2 -- because there is insufficient antecedent basis for this limitation in the claim, i.e., claim 1 does not recite "a switch".

As to claim 7, "said optical mouse sensor" in line 7 must be changed to -- an optical mouse sensor of said optical mouse -- because there is insufficient antecedent basis for this limitation in the claim.

As to claims 6, 12 and 13, "circuit" in line 2 must be deleted so as to make the corresponding feature consistent with the drawing. See Fig. 2 or 3 and the specification objection above. Additionally to claims 6 and 12, "an optical" in line 2, must be changed to -- said optical - - because there is sufficient antecedent basis for this limitation in the claims, i.e., claims 1 and 7 both recite "an optical mouse sensor".

As to claim 9, -- of said optical mouse -- must be inserted immediately after "movement" in line 2, so as to clarify the claimed invention.

It is in the best interest of the patent community that applicant, in his/her normal review and/or rewriting of the claims, to take into consideration these editorial situations and make changes as necessary.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 4, 6, 11, 13 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claims 4 and 11, it is not clear what the applicant means “an analog and digital core.... is powered down”, recited in lines 2-3 of these claims, i.e., it is not clear an analog and digital core is a connecting wire or a circuit and if it is a wire, it is not clear what applicant means “a wire” is powered down.

As to claim 6, it is not clear what the applicant means “said mechanical displacement comprises an integrated add-on to an optical mouse sensor circuit”, i.e., it is not clear that “an integrated add-on to an optical mouse sensor circuit” is an element or “an integrated add-on” is an element separated from an optical mouse sensor.

As to claim 13, it is not clear what the applicant means “wherein said ... **components....** on a same circuit board”, i.e., the disclosure does not expressly teach what components of the mechanical displacement sensor and the optical mouse sensor are.

As to claim 14, it is not clear what the applicant means “said optical mouse sensor **consumes no current** in said standby state”, i.e., the applicant means the optical mouse sensor

does not receive a power from a power supply. The disclosure is written in such a way the examiner does not understand that, when the optical mouse sensor consumes no power (i.e., the optical mouse sensor has no power at all or the power to the optical mouse sensor is cut off), the optical mouse does not respond to any motion of the optical mouse (i.e., all elements of the optical mouse sensor 250 including **a navigation and a power management control circuit 330**, see Fig. 3, do not respond to any motion of the optical mouse, see the description, page 8, lines 15-23, “However, ... **the power to the optical mouse sensor 250 is cut off**. Therefore, the optical mouse sensor 250 is not able to detect any future movement as the vital analog and digital core of the navigation engine is powered down.... However, in the state of navigation engine shut down, **the optical mouse sensor 250 does not respond to any motion of the optical mouse.**”), how the power management control circuit 330 or the navigation can receive a signal from the mechanical displacement sensor 100 (See the description, page 9, lines 10-25, which discloses “With reference. ... Once movement is detected, the output of buffer 108 is at a high logic state. **This high logic state is detected by the power management control circuit 330.** The control circuit 330 then triggers the optical mouse sensor 250 to resume from a power-down mode (e.g., powering up).... **That is, when motion is sensed mechanical displacement sensor 100 outputs high logic to signal the optical mouse sensor 250, the optical mouse sensor 250 powers up from the powered down state.** Then, when no motion is detected for specified time period the optical mouse sensor 250 powers down to a non-motion aware state, etc.” It is apparent that the description, page 9, lines 10-25 contrasts with the disclosure, page 8, lines 15-23. Further, there is nowhere to describe the optical mouse sensor 250 receives the power supplied from (where the power is come from).

It is noted applicants that due to the above 112 rejections, the following art rejections to these claims are based as best understood by the examiner.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Sitalasai et al. (US 2005/0104853 A1), hereinafter Sitalasai.

As to claims 1, 5, 7 and 15, Sitalasai discloses a wireless optical mouse and an associate method of minimizing power consumption of an optical mouse, the wireless optical mouse (a wireless optical mouse, see paragraph 62, line 3) comprising an optical mouse sensor (note that examiner considers the optical mouse sensor of Sitalasai comprising all the elements housed by a mouse housing, such as a microprocessor, a printed circuit board 7, and other devices, see paragraph 0082, except the wake-up system (1, 3) and a DC-to-DC converter); and a mechanical displacement sensor (1, 3) (a wake up system including mechanical motion sensor 1 and a detection circuit 3, see Figs. 7 and 8, paragraph 0064) coupled to said optical mouse sensor, to detect a movement of said optical mouse (see paragraph 0073); causing the optical mouse to go into a standby mode (a sleep mode, see paragraph 0062) of operation when the mechanical displacement sensor (1, 3) detects that the optical mouse is motionless; and taking said optical mouse sensor out of said standby mode of operation or powering up the optical mouse sensor

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from a standby mode, when movement of said optical mouse is detected by said mechanical displacement sensor (see paragraphs 0073, 0076, 0082 and 0084). Accordingly, the limitations of these claims are read in the Sitalasai reference.

As to claims 2 and 8, Sitalasai discloses the mechanical displacement sensor (1, 3) comprising a motion sensor switch (1) which sets to a first state (a sleep mode) corresponding to a standby mode when no movement is detected (see paragraph 0002, 0035) and sets to a second state corresponding to a powered-up mode (a wake-up mode or an active mode, see paragraph 0002, 0074) when movement is detected.

As to claim 9, Sitalasai discloses the mechanical displacement sensor (1, 3) defaulting to an open state when no movement is detected (see Fig. 2B or 4B, paragraph 0067 or 0069).

As to claims 3 and 10, Sitalasai further discloses the mechanical displacement sensor (1, 3) comprising a buffer (22) that outputs a high logic signal when said switch closes (see Fig. 7, paragraph 0077, "The motion... when the switch is closed,... the terminal 22 of the inverter U9A goes high ...").

As to claims 4 and 11, Sitalasai also teaches that during the standby mode of said optical mouse sensor, an analog and digital core of said optical mouse sensor is powered down (paragraph 0082, which discloses no power is supplied to the microprocessor during a sleep mode, i.e., no power is supplied to an analog and digital core of the optical mouse sensor during a sleep mode).

As to claims 6 and 12, Sitalasai discloses the the mechanical displacement sensor (1, 3) and the optical mouse sensor integrated in the optical mouse (see paragraph 0063).



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As to claim 13, Sitalasai discloses the mechanical displacement sensor (1, 3) including the motion sensor 1, which is mounted directly on the printed circuit board (7) of the optical mouse sensor (see Fig. 1, paragraphs 0063, 0065).

As to claim 14, Sitalasai discloses that during the sleep mode, no power is supplied to a microprocessor and other devices of the optical mouse sensor (see paragraph 0082), i.e., the optical mouse sensor consumes no current during the sleep mode.


***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy H. Nguyen whose telephone number is 571-272-7675. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached at 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JHN  
September 3, 2006

  
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Technology Division: 2629